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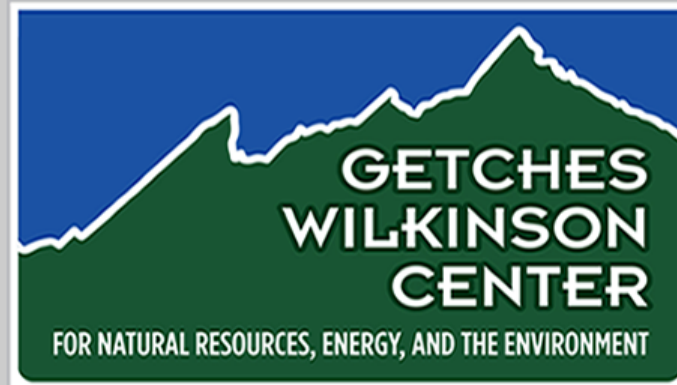
Getches-Wilkinson Center Newsletters

Resource Law Notes Newsletter, no. 41, fall issue, Aug. 1997

University of Colorado Boulder. Natural Resources Law Center



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RESOURCE LAW NOTES, no. 41, fall issue, Aug. 1997
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RESOURCE LAW NOTES

Natural Resources Law Center • School of Law • University of Colorado at Boulder



Number 41

Fall Issue, August 1997

Dam Good Conference

In June, the Center convened its eighteenth annual summer conference, focusing on *Dams: Water and Power in the New West*. The conference was a great success, with a variety of speakers and guests from across the country sharing their insight into the changing role of dams meeting new economic, social, and environmental objectives. As always, the debate and discussion sparked by the speakers often extended beyond the brief question and answer sessions.

The conference began with an historical overview by Gilbert White, University of Colorado, who described how the design, construction, and operation of dams in the West has evolved over time to reflect broadening social values in water. Noted Two Forks opponent Dan Luecke of the Environmental Defense Fund then followed with an examination of the costs and benefits of dams, focusing on the Colorado-Big Thompson Project and the Columbia-Snake dams. Among the benefits he identified were hydropower, flood control, navigation, water supply, and recreation, while environmental costs include loss of riparian habitat and populations of anadromous species.

The changing western landscape was then examined from two perspectives. First, Pam Case of the U.S. Forest Service discussed the relationship between water development and demographic trends. Drawing from her highly influential report to the Western Water Policy Review Advisory Commission, Case explained that the rapid population growth and settlement patterns in the West's recent history are more closely tied to broad economic trends than to either water-development patterns or the structure of the transportation network. The second perspective came from Jeanne S. Whiteing, Whiteing and Smith, who discussed the changes in water management based on the recent



Flood releases at Glen Canyon dam

recognition of Tribal water claims through litigation and settlement. Whiteing described the effects that dams have had on these rights, as well as the changes in operating criteria that have been sought to satisfy Tribal demands for water and power, including Tribal participation in relicensing decisions.

Another issue explored during the conference was the effect of electric utility industry restructuring on hydroelectric facilities. Rick Gilliam, Land and Water Fund of the Rockies, described the ramifications of restructuring the industry to a free-market, investor-owned utility in terms of marginal energy costs and environmental effects. Gilliam introduced a few competitive restructuring models of management intended to balance the diverse interests at stake. Conceding that privatization may reduce electricity costs, Bill McEwan of the Arkansas River Power Authority responded by criticizing privatization as a threat to environmental

protection. A critical review of restructuring was also provided by Angus Duncan of the Columbia/Pacific Institute who attacked the Pacific Northwest Governors' energy review due to its narrow focus and its failure to adequately consider or resolve issues relating to Columbia River governance, ecosystem conservation, and endangered fish recovery.

Charles Wilkinson's keynote address is reprinted inside, beginning on page 6.

The second day of the conference focused on western water facility management, and the challenge of trying to integrate old river uses with new values. Larry MacDonnell, consultant and former director of the Natural Resources Law

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Current or Recently Completed NRLC Research Projects

In addition to holding conferences and participating in other events, the Center continues to maintain a highly active research program. Funding for these efforts is provided by a number of organizations. The continued support of the Ford Foundation, the Hewlett Foundation, and various federal agencies (through project-specific contractual arrangements) has been critical to the maintenance and growth of the research program. Several of the Center's current research projects are briefly described below.

Restoring the Waters Publication

The Center is excited to announce the recent publication of *Restoring the Waters*, which was previewed in the last issue of *Resource Law Notes*. Designed, in part, to accompany a series of PBS broadcasts examining western water issues, *Restoring the Waters* weaves together graphics and a straightforward narrative into a user-friendly document designed to serve a variety of audiences. In twenty-three 1 to 3 page stories, *Restoring the Waters* portrays innovations in water use and management that have provided important environmental benefits. The stories identify some of the public and private groups working to conserve, protect, and restore water resources, as well as the strategies by which these innovations have been implemented. States represented in the stories include Arizona, California, Colorado, Idaho, Nevada, Oregon, Washington and Wyoming. Copies for educational purposes are now available from the Center at no charge. To receive one or more copies, please call Kelly Hausmann at 303-492-1272.

Final Report to the Western Water Policy Review Advisory Commission

The Center has recently submitted its final report to the Western Water Policy Review Advisory Commission examining the role that federal agencies play in western watershed initiatives. This report also examines the history of place-based water management in the United States, from the scale of the small watershed to larger river basin efforts. The Center continues to advise and assist the Commission as this information is crafted into the overall Commission report, expected in early Fall. Commission reports are generally available upon request to the Commission offices in Denver (303-236-6211).

Reform of the Federal Advisory Committee Act (FACA)

Recent Center research examining the application of FACA to community-based groups has produced a legal opinion that is shaping current interpretations of the Act and a recently initiated effort to revise the FACA rules. The Center's opinion concludes that under case law interpreting FACA's application to independent groups—groups not established by a federal agency—FACA does not apply to the many community-based forestry and watershed groups that have emerged in recent years. Federal agencies may participate in the independent groups as long as they do not exercise "strict management or control" over the groups. The Center's goal in this project is to clear up the many misunderstandings about the applicability of FACA.

Farm Bill Water Rights Task Force

As described in detail in our last issue of *Resource Law Notes*, the Center continues its involvement in the work of the task force. The task force is working to clarify Forest Service authorities regarding bypass flows, and is seeking broadly acceptable strategies for protecting instream flows on Forest Service lands while not infringing on private water rights. Due to the highly

political nature of the issues involved, the task force—including the Center's Betsy Rieke and C.U. Law Professor David Getches—continues to make slow and incremental progress.

Innovative Approaches to Forest Planning

The Center continues to collect and analyze case study information illustrating innovative processes being used to enhance community and national interest group participation in U.S. Forest Service planning. This research is timely given that many forests are now beginning the preparation of the "second round" of plans under the RPA/NFMA planning framework. Several innovations have already been identified in those regions where new planning activities are already underway.

Research Methods Project

In an effort to bring greater academic rigor and insight to the evaluation of different institutional strategies for solving natural resource management problems, the Center is preparing a document that outlines and demonstrates a methodological framework of institutional analysis. This framework is of particular importance as the Center becomes more involved in the critical analysis of the

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El Paso Fellowship: Spring 1998

The Natural Resources Law Center is pleased to invite applications for the El Paso Energy Corporation Law Fellowship for the Spring semester (January to May), 1998. The Fellow will spend a semester in residence at the University of Colorado School of Law researching a topic concerning oil and gas, minerals, energy, or a related public land issue. Emphasis is normally on legal research, but applicants from law-related disciplines, such as economics, engineering, or the social sciences, will also be considered. While in residence, the Fellow will participate in activities of the Law School and the Center, and will have an opportunity to exchange ideas with faculty and students in both formal and informal sessions. The School of Law will provide office space, use of University research facilities, and some research and secretarial support. A stipend of \$20,000 plus benefits is

generously provided by the El Paso Natural Gas Foundation.

Applicants will be evaluated based on their professional and educational qualifications, including writing skills, and the importance and relevance of their proposed topic. The Fellow is expected to produce written work suitable for publication in a professional journal that will lead to better understanding of issues and improved practice or policy in the field. To apply, candidates should submit a proposal in the form of a letter or statement describing a research project, along with a resume. One or more (maximum of three) letters of support can be submitted directly. Applications and letters of support should be addressed to Kathryn Mutz, Natural Resources Law Center, Campus Box 401, Boulder, CO 80309-0401. The review of applications will begin September 2.

Conference, *cont.*

Center, began the discussion with an historical review of the evolving legal framework of federal dam governance from the water development era to the modern focus on regulation and environmental protection. Thomas Russo of the Federal Energy Regulatory Commission then discussed the logistics of relicensing and the adaptation of FERC's relicensing procedures to meet modern challenges. The environmental benefits of reoperation, relicensing, decommissioning, and recapture of federally regulated hydro-power facilities were described in the presentation of Richard Roos-Collins of the Natural Heritage Institute, who argued that operation and management of water facilities could be significantly improved

Recent Projects, *cont.*

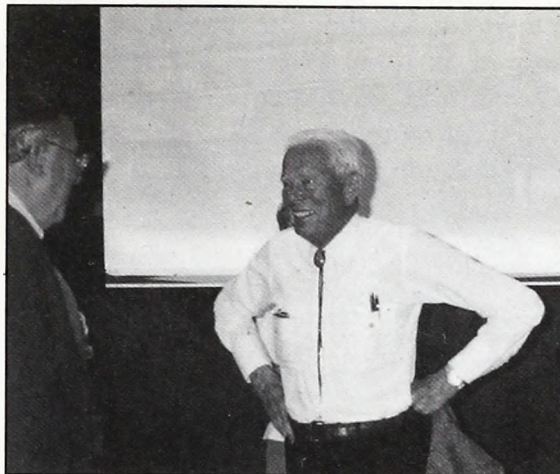
benefits, weaknesses, and limitations of collaborative groups in the management of water and land resources. This project is now scheduled for completion this winter.

Report Examining the State Role in Western Watershed Initiatives

The Center is finalizing its report examining the relationship between local watershed initiatives and state governments in the West. The report describes the historical and ideological context that has encouraged the recent proliferation of these collaborative efforts, and the manner in which some western states have chosen to support and participate in these initiatives. Strategies are identified to assist those states interested in furthering these experiments in watershed-based resource governance and management.

Book on the Costs and Benefits of Resource Preservation

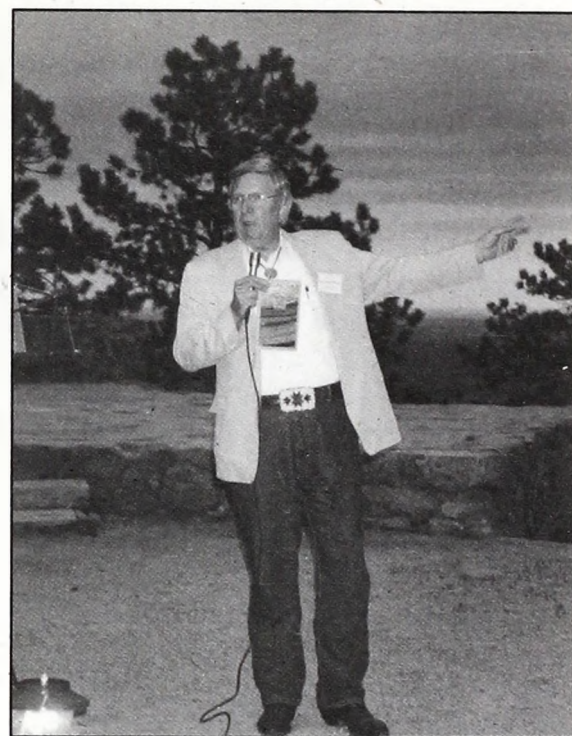
The Center has been proud to contribute to the work of Gary Bryner, our recent El Paso Energy Corporation Law Fellow, as he completes his forthcoming book examining the struggle in the West to balance wilderness preservation with resource development. Using case studies, including the Arctic National Wildlife Refuge in Alaska, the Grand Staircase-Escalante National Monument in Utah, the proposed Northern Rockies Ecosystem Project, and the spotted owl controversy in the Pacific Northwest, the book will feature a proposed policy framework for balancing the costs of foregoing resource development and other economic activity with the benefits of wilderness preservation and biodiversity protection.



Gilbert White fielding a question.

by focusing on interests broader than energy generation and through better compliance with existing environmental laws.

Tuesday's presentations also examined the conflicts between old uses and new values in terms of several specific river basins. Carl Ullman, Director of the Water Adjudication Project for the Klamath Tribes, discussed the inadequacy of the water supply in the Klamath Basin due to competing uses and the need for integrated management to deal with such problems. John Thorson, Special Master of the Arizona General Stream Adjudication, described the conflict pitting upstream and Tribal interests against downstream water users in the Missouri River Basin, arguing that the Corps of Engineers should adopt a locally based management style rather than rigidly adhering to their master manual review process. Ned Andrews, U.S. Geological Survey, discussed the effects of the Glen Canyon Dam on the Lower Colorado



Gary Holthaus addresses the crowd on Flagstaff

River Basin. Andrews explained how increased awareness of the ecological effects of the dam on the Grand Canyon, as well as the realization that recreational benefits exceed economic gains from hydroelectric power, has prompted changes in reservoir operations—including the recent experimental flood to benefit the downstream ecosystem. In response, Joe Hunter of the Colorado River Energy Distributor's Association criticized the experimental flood as disregarding NEPA and the ESA, but agreed that the dam needs to be operated on an adaptive management basis within the parameters of our knowledge and guided by deliberate planning and

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Betsy Rieke, Chuck Howe, Frank Wilson, and Bob Weaver enjoying a perfect June afternoon.

Conference, *cont.*

legitimate science rather than short-term policies driven by political considerations.

Conflicts between dams and wildlife in two additional river basins were also discussed. Margot Zallen from the Interior Department's Office of Regional Solicitor discussed the Platte River conflict and how the relicensing of Kingsley Dam has impacted the region's four endangered species and their habitat. After exploring the relationship between upstream development and downstream values—including wildlife, municipal water, and recreation—Zallen described the recent progress being made toward a regional settlement and the development of a recovery implementation program. Don Miller of the Native American Rights Fund painted a less optimistic picture when discussing the tradeoffs between dams and salmon in the Columbia-Snake Basin. Miller explained how the development of dams has adversely affected the lifecycle of anadromous fish, resulting in significant reductions in numbers as well as several listings under the Endangered Species Act. Miller critiqued current recovery efforts, potential deregulation of dams, and the regional forum used to address these issues.

The final day of the conference began with a debate over privatization and divestment of federally owned and operated dams. Michael Block of the Goldwater Institute began the discussion with his ambitious proposal to market the federal control of power production to private parties while transferring ownership and control of non-power resources to appropriate stakeholders organized in river associations. The proposal sparked debate over compliance with federal environmental regulations as well as

questions regarding the rules of membership in the proposed river associations. Jack Garner from the Eastern Colorado Area Office of the Bureau of Reclamation followed with a discussion of the framework used to guide divestment of Bureau of Reclamation projects. Garner contrasted the ad hoc and highly politicized privatization efforts to those being channeled through the Bureau's modern "title transfer" process, identifying how the agency's process is designed to protect the environment and the people associated with federal water facilities while efficiently pursuing the goals of federal divestment.

The conference concluded with contrasting visions of the future provided by John Keys, Bruce Driver, Bennett Raley, and Dan Tarlock. Keys, representing the Pacific Northwest Regional Office of the Bureau of Reclamation, began with a discussion of new ways to manage western water resources, focusing on efficient management rather than development. Bruce Driver, Consulting Attorney, advocated a greater reliance on watershed solutions, a reduced reliance on federal environmental legislation through strengthened state programs, a stronger commitment to maintaining instream flows for fish and wildlife, and the pursuit of those title transfers that satisfy stringent environmental and economic criteria. In response, Bennett Raley, Trout & Raley, P.C., argued that all reforms must respect existing rights and expectations under the prior appropriation system unless Congress dictates otherwise through a clear mandate that would provide a rational alternative to existing expectations. Dan Tarlock, Chicago-Kent College of Law and lead author of the upcoming report from the Western Water Policy Review Advisory Commission, advocated a future emphasis on adaptive management, restoration of

natural hydrographs, and risk allocation among major stakeholders through shared risk assumption rather than rigid entitlements.

In addition to the regular sessions, conference participants enjoyed a keynote address from Charles Wilkinson, University of Colorado School of Law, focusing on the difficult issues surrounding continued western population growth in water-short regions. These remarks are the featured substantive article in this edition of *Resource Law Notes*, beginning on page 6. Conference participants were also treated to sunset readings from atop Flagstaff Mountain by Gary Holthaus, Anderson Center for Interdisciplinary Studies, which followed the traditional June conference barbecue. Complete notebooks as well as audio-tapes of the session are available for purchase. See page 10 for details.

No Fall Conference

The Center has decided not to hold a public lands conference this fall. Instead, we have chosen to focus our efforts on our next June conference.

Fall "Hot Topics" Program

The Center is currently organizing our fall series of "Hot Topics" presentations. Our first program on September 9 will feature an analysis of the recent Platte River agreements. Margot Zallen, Senior Attorney with the Office of the Regional Solicitor, Rocky Mountain Region of the U.S. Department of the Interior, and James Lochhead, Executive Director of the Colorado Department of Natural Resources, will describe the process and the results of the years of controversial negotiations centered on protection of endangered species in the Central Platte area.

In October, the noontime series will discuss the report of the Western Water Policy Review Advisory Commission. Commission and Center staff will lead the discussion and answer questions on the report, which is due to be released for public comment the first of October.

A complete schedule of "Hot Topics" events will be mailed to interested parties when available in the near future. Interested parties are welcome to call the Center for additional information (303-492-1272). As usual, all programs will be held at the offices of Holland & Hart in Denver.

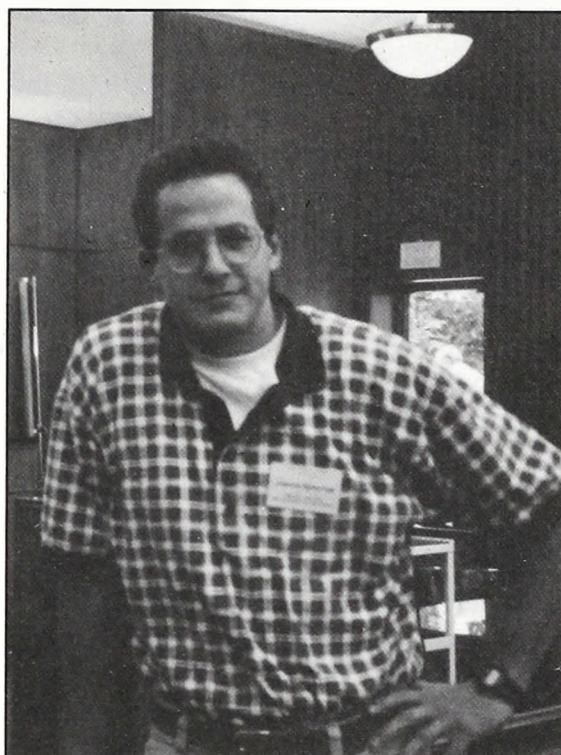


Pam Case and Jeanne Whiteing ponder a difficult question.

Staff Greetings and Goodbyes

The Center receives valuable student research help and office support throughout the year, employing first and second year law students as research assistants and undergraduate students for office support. This summer we are proud to have two new research assistants and one student office assistant whom we would like to introduce.

Gabriel D. Carter was born in La Jolla, California, but raised in northeastern Washington state near the British Columbian border in a small, rural town called Chewelah. Chewelah's primary industries are logging and ranching. Gabe's father is a former lumberjack and owner of a small logging company specializing in selective cutting. After completing a BA in Sociology at Colorado College in Colorado Springs, he eventually gravitated back to eastern Washington and formed a forestry partnership with some friends. Work consisted mostly of subcontracting with the Forest Service for pre-commercial tree thinning and watershed restoration projects, but was cut short when Gabriel was accepted at the University of Colorado School of Law. Gabe has just finished his second year of law school in Boulder, specializing in environmental law, but, in keeping with his background in critical sociology, has now worked for over a year for Professor Richard Delgado



Josh Kerstein

on civil rights and race-based legal issues. His interests are primarily National Forest management and western water law policies, as well as environmental justice issues. He recently published an environmental justice article on South African water law in the *Colorado Journal of International Environmental Law and Policy*, for which he is an Articles Editor. He hopes to work in the field of environmental policy and eventually teach at the college level (although not necessarily law).

Joshua Kerstein, a native of Colorado (minus six-months in Knoxville, Tennessee) received his B.A. from Washington University in 1994. He majored in both Economics and Political Science, concentrating his studies on environmental issues. In his year off before law school, he backpacked through Europe, then later took a position with the National Multiple Sclerosis Society in Missouri. Josh recently completed his second year of law school at the University of Colorado at Boulder, where he is an Associate Editor for the *University of Colorado Law Review* and a member of the Environmental Law

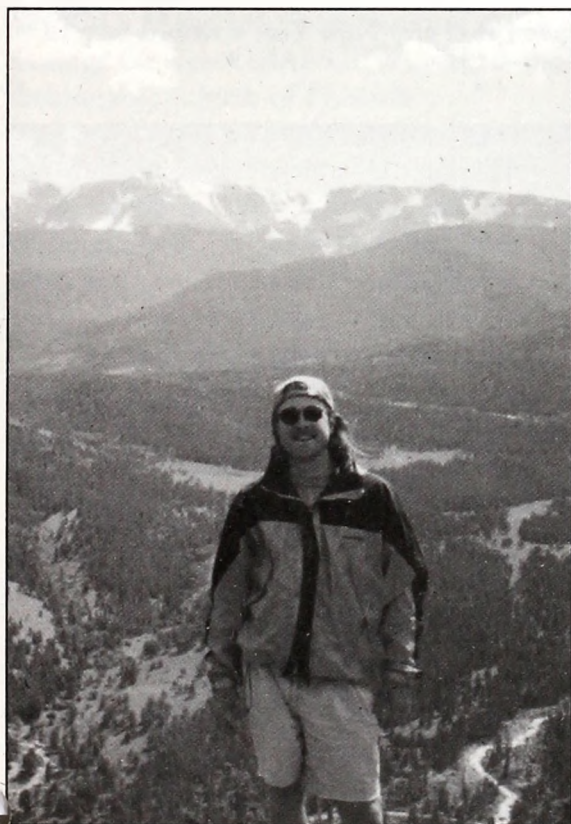
Former NRLC research assistant David Gillilan has recently co-authored a book on instream flows. *Instream Flow Protection: Seeking A Balance in Western Water Use* is available from Island Press.

Society. He clerked for Judge Janice B. Davidson on the Colorado Court of Appeals after his first year of law school, and volunteers for the Boulder District Attorney's Office. Josh is working on several projects for the Center this summer, focusing most of his time investigating public lands values. He has traveled through much of the western landscape, and enjoys hiking, skiing, and cycling, intending to test his endurance in the "Ride-the-Rockies" bicycle tour two summers from now.

Gabe and Josh have already made valuable contributions to several Center projects, including a report on valuing the public lands for the Turner Foundation, Larry MacDonnell's book on a reclamation vision for the 21st Century, Gary Bryner's work on attempting to value biodiversity for wilderness preservation, and in the production of this newsletter.

Another special addition to our staff is our undergraduate student assistant Kelly Hausmann, a senior at the University of Colorado at Boulder who is originally from South Dakota. Kelly is majoring in Speech, Language, Hearing Science (SLHS) and plans to go to medical school. She volunteers at Avista Hospital in the Newborn Hearing Screening Department and enjoys rollerblading, jogging and dancing. Kelly handles publications, reception, and other general office work, and is a big asset to our staff.

Along with these three new faces, we said goodbye and thank-you to several familiar ones. Dr. Gary C. Bryner, the 1997 El Paso Energy Corporation Law Fellow, completed his fellowship at the Center. Gary's main area of interest and research is in balancing preservation and resource development. In keeping with this area of interest, Gary, a native of Utah, researched the new Grand Staircase-Escalante National Monument. Look for a brief narrative of his studies in the Fall issue of *Resource Law Notes*. The Center is currently looking for a fellow for 1997-1998. Please see page 2 for details. We would also like to thank last year's student research assistants—Sara Galley, David Gillilan, Scott Miller, and Luke Mulligan—and student assistants Julie Casida and Liz Dorn for their invaluable contributions to the Center last year.



Gabe Carter

Coming to Grips with Growth in the West

Remarks of Charles Wilkinson, Moses Lasky Professor of Law at the University of Colorado, at the Natural Resources Law Center's June conference Dams: Water and Power in the New West, June 2, 1997.

Due to space limitations, the following transcript has been edited to focus on the central message of the presentation—namely, that the West's preoccupation with growth has come at a steep and increasingly unacceptable cost. Transcripts of the full presentation are available from the Center (303-492-1272).

For the past 34 years, since I first came out here to go to law school, I've been trying, in one fashion or another, to learn about the West. Like so many before me, I tended to focus my energies on the nineteenth century.

How seductive it was. Lewis and Clark. The mountain men. The idealistic family journeys to farm and settle the lush Willamette Valley. The epic gold rush.

To be sure, during the 1800s we moved a lot of earth, rearranged rivers, inundated canyons, caused human diseases and death with our poisons, and killed off many wolves, eagles, and straw-colored bears. But the scale of our assault on the land in this century, especially since the end of World War II, has been magnitudes greater.

The rise of the ranch cattle industry, a variant of Jefferson's dream but faithful to it. Yellowstone. Yosemite. Muir.

Somewhat ironically, learning about the nineteenth century included studying the vibrant civilizations that would be overwhelmed by Manifest Destiny. The Mexican mission system flourished until the War on Mexico, the Bear Flag, and the 1848 conquest treaty, called Guadalupe

Hidalgo. The tribes lived free under their own rule in the Northwest until the Stevens treaties, in the Southwest until the Apaches were cornered, in the upper Great Plains until the Sioux were finally closed in. It is easy to see how the nineteenth century drew my—our—attention. So many freedoms, so many conquests.

But as my learning has gone on, I find myself ever more preoccupied with this century and the one we are about to enter. For finally I understand that this is the century in which we have overwhelmed the land, broad though the western landscape may be. To be sure, during the 1800s we moved a lot of earth, rearranged rivers, inundated canyons, caused human diseases and deaths with our poisons, and killed off many wolves, eagles, and straw-colored bears. But the scale of our assault on the land in this century, especially since the end of World War II, has been magnitudes greater, so much so that comparisons can hardly be made. Further, the pace we have put ourselves on, which is accelerating, has generated not just questions, but also anxiety and despair about the next century, even in optimistic people. This is in part a matter of what we call economics but it is also an affair of the heart and soul, for lord, how we westerners love this large and varied, plain and wondrous, land.

One way to begin to comprehend both the highway we have taken and the nature of the terrain that lies ahead, is to gain a sense of the region in 1945 and compare it

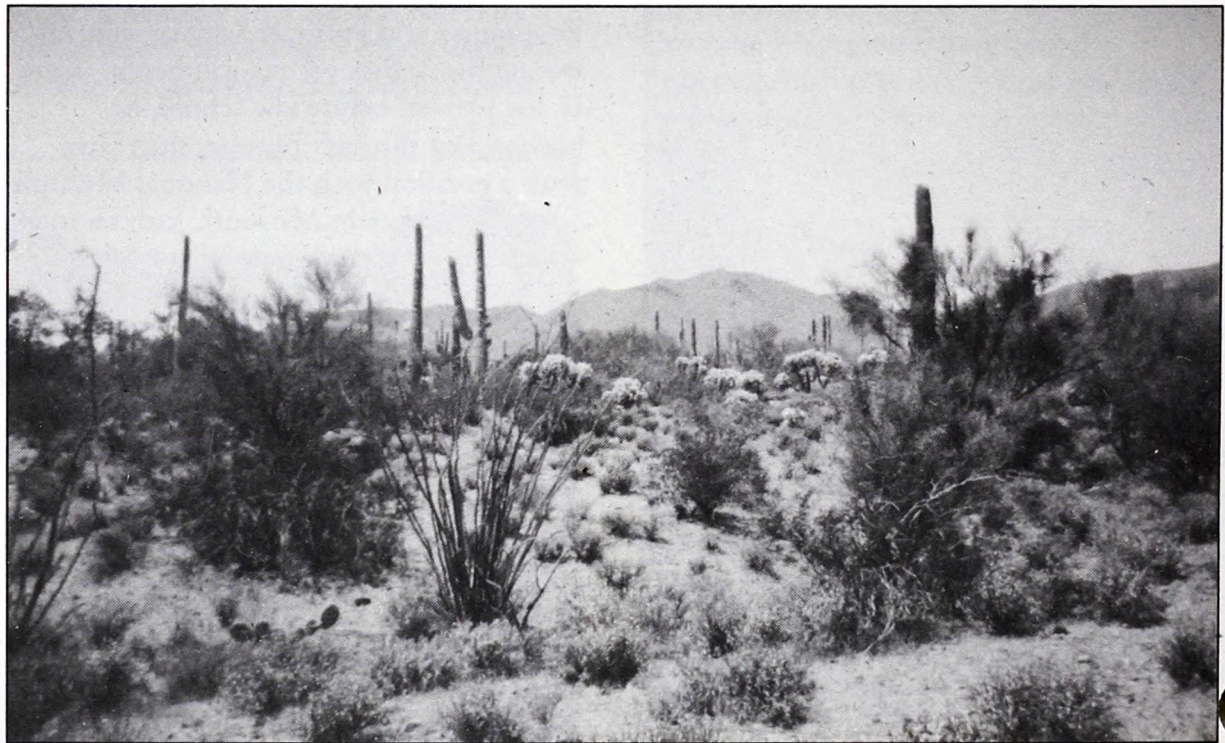
to today. There is also another point in time, itself not so many years ago, and a particular locale, that can offer perspective on the origins and scale of these broad-shouldered accomplishments.



The din rose to an ear-shattering level at the corner of Central and Washington, the heart of downtown, as midnight approached on New Year's Eve. Celebrants discharged round after round from their pistols and rifles. A steady barrage of fireworks, many of them homemade and amounting to small bombs, blasted holes in the dirt streets. The high, shrill whine of steam whistles cut through the cool night air. One whistle operator, rising to the occasion with a special flair, had constructed an elaborate contraption with seven separate tubes, emitting "a noise both appalling and wonderful."

Not that the town lacked for activity on normal days. Although the population was just 5,500 and although the demands of farming, the principal occupation in the valley, left many residents with precious little free time, this settlement knew how to celebrate. There were dozens of saloons. Gambling licenses were easy to obtain and the place had attained something of a reputation in that regard. One reporter called it "the Monte Carlo of the Union."

But, even given the proven capability for gaiety in this wide-open town, even given that any New Year's would be a fit



Sonoran Desert

excuse for an extended bash, the excitement was at its all-time high in Phoenix this particular evening, because a new century was breaking across the land.

Phoenix welcomed the arrival of the twentieth century with a spirit of buoyant optimism and ambition. It had been named the territorial capital in 1889, wresting that honor away from Prescott. By 1895, it had tied itself into both the

Although there are plenty of remnants of the idea that water policy is a closed domain, the dominant approach now is to treat water as one organic part of natural resources policy, of social policy.

Southern Pacific line and the Santa Fe to the north. Now Phoenix had the means to get its produce, both grains and specialty produce, especially its oranges, to markets from coast to coast. And Phoenixians discovered early on that the magnificent climate and sweet citrus smells could boost a promising real estate market: advertisements in the *Arizona Republican* exclaimed that "A Princely Spot is ORANGEWOOD. Make your home among the Orange Groves. ORANGEWOOD is the fashionable suburb of Phoenix. . . ."

Yet the hard fact was that turn-of-the-century Phoenix remained a small, dirt-road, territorial town with limited resources. That could be changed, but hard work lay ahead and people would have to pull together.

The city fathers faced two overriding issues. The first was statehood. In 1863, Congress split the sprawling New Mexico Territory, and created Arizona Territory. Any chance of statehood, however, lay dormant for decades.

Water was the other overarching matter. Phoenix needed a major dam on the mainstem Salt River to store the floodwaters and put them to good use by releasing steady flows to irrigators during the summers and dry years.

The tasks were daunting, but the timing was perfect and Phoenix's civic leaders were able and visionary. In 1902,

Congress passed the Reclamation Act. With Benjamin Fowler and others pushing Phoenix's proposal energetically and effectively in Washington, D.C., Phoenix's dam-and-reservoir project on the Salt River moved to the head of the line.

From that point on, it was a long ride but downhill all the way. The dam, rightly named after Theodore Roosevelt, was dedicated on March 18, 1911. Roosevelt himself did the honors. With 350,000 cubic yards of stone cut by Italian stone-masons, the elegant Roosevelt was the largest masonry dam in the world.

Statehood followed on the heels of Roosevelt Dam and its nineteen-mile-long reservoir, with the long-awaited moment falling on Valentine's Day, 1912. Although no seven-pipe steam whistles were reported, the ceremonies eclipsed the New Year's Eve celebration twelve years previous and even the visits of Roosevelt and President Taft before him. Phoenix, now a town of some 12,000 strong, had shown that it could dream its own actual future.

Most accounts, at the turn of the century and later, remark on Phoenix's single-minded drive and civic self-aggrandizement. One writer called it "aggressive boosterism," and it was. But it was also quintessentially American and western, that is, of the American West built by Europeans. Anything and everything was possible.

The other towns of the Southwest a century ago had much in common with Phoenix. Los Angeles had boomed from a small agricultural village of just 11,000 in 1880 to over 100,000 by the beginning of the century. El Paso, the largest city in the deep Southwest with a population of 16,000 people in 1900, had grown into a brawny industrial and mining center along the Mexican border with four separate railroad connections. Albuquerque, with a big "Americanization" push, blazed the statehood trail for New Mexico, which joined the Union in January, 1912, five weeks before Arizona.

Salt Lake City had become the capital city of a State of the Union in 1896, with a turn-of-the-century population of 54,000. By 1900, the Denver area had grown to 136,000, twenty-fifth largest in the nation. A reminder, though, of how fundamentally different that frontier "metropolis" was: Denver had 800 miles of streets, of which just twenty-four miles were paved.

Las Vegas? That future dynamo did not even exist in 1900 nor, after its founding in 1905, did it show up on the census of 1910 or 1920. The floor for qualifying as a city was 2,500 people.

Needless to say, at the close of World War II, Phoenix was no longer a dirt-road, 5,000-person town. It had become a city of 75,000 people, the center of a metropolitan area with a population of 250,000. Still, it more closely resembled the celebratory, territorial settlement of January 1, 1900, than it did the megalopolis, pushing 3 million people, that would swarm all over the Valley of the Sun half a century later. The civic leaders at the end of the War, at the beginning of a whole new time, knew what they wanted for the Phoenix area. The same was true for all of the cities of the Southwest. They all had

Sustainability today is broadly writ, encompassing a much broader range of things to be sustained, including salmon, eagles, wolves, humbler animals such as voles and chubs, archaeological sites, good rafting water, long vistas, wetlands, open space, solitude, beauty, and the cultures of traditional societies, whether they be Indian tribes, Hispanic towns, or ranch and farm communities.

grown steadily but they all wanted much, much more—expansion of eight, ten, twelve times, more.

I saw some of this myself, though my vantage point was limited, when I lived in Phoenix, first getting my sea legs as a lawyer, when the heavy aromas from the orange blossoms intoxicated me so on mild spring evenings. Even then, in 1965,

Coming to Grips, *cont.*

Phoenix remained a small city, where most lawyers went to work in slacks and no sport jackets, where you saw as many ranch hands as lawyers downtown, and where the perfume from the orange groves had not given way to condominiums and shopping centers.

A small city. When I made an excited call to my mother in Michigan to tell her of my job with an excellent law firm in Phoenix, I received a long dead space from the other end of the line. Then she asked, truly asked: "*Phoenix? Phoenix where?*" On the day I first drove into town, I wanted to go straight to the firm's office building. Having been told that Lewis and Roca was a "downtown firm," I stopped at a coffee shop to ask directions. "How do you get to downtown? You're smack in the middle of it, young fella."

The moment passed quickly, just as all moments have passed quickly during modern Phoenix's history. When I lived

Water policy is social, as well as natural resource policy. It always has been. Transfers can take irrigated land out of business and debilitate farm and ranch communities. We have seen that at Owens Valley, along the Arkansas River in Colorado, and in some Arizona rural areas before the water farming debacle was largely arrested in the early 1990s.

there, as at the turn of the century, the ambition was as palpable as Camelback Mountain and the Superstitions. I knew well that the city had just attracted a Triple A baseball team, the Phoenix Giants, and that the civic determination was to become major league.

I had no remote idea, though, that Phoenix had long ago outstripped its resource base in the Salt River Valley, that water was just then backing up against

Glen Canyon Dam in order to get electricity to Phoenix and other cities, and that the Salt River Project, which supplied energy to metropolitan Phoenix, was heading up various consortiums to build coal-fired power plants in northern Arizona, Nevada, New Mexico, and even northwestern Colorado. I never had any real sense of how incredibly effective the civic and industrial leaders of Phoenix had been during the first two-thirds of the century, nor did I know that the other cities of the Southwest had undertaken similar pell-mell races, finally uniting in what I would later call the Big Build-up of the Colorado Plateau.

I never took the time to identify the plain benefits of the West's grand undertaking—cool, comfortable rooms for children to grow in; room for businesses to prosper in and give us the choices we want; peaking power to prevent brown-outs in critical-care rooms; even beautiful artificial lakes. Nor did I understand that the benefits would be accompanied by large, often avoidable, costs—subsidies that helped build government budget deficits; drowned canyons that once gave us hanging gardens, beauty, solitude, and Anasazi villages tying us to a past at once different and common; wounded or destroyed runs of the quick, strong Pacific salmon; and poisons for workers in the uranium mines and mills and ordinary people breathing bad air.

I did not begin to comprehend, either, the many forms that conquest can take or how much our society can accomplish in a flicker of time, how the span of time since New Year's Day, 1900, was just a strobe-light flash. Gaining some understanding of those things would take a journey of thirty years. What I did understand then was that everyone took a personal pride and stake in Phoenix, so young and muscular, and that everyone believed that everything was possible.

And mark it down that it worked for Phoenix and the other Southwestern urban centers that joined together to secure large water projects, mines, and power plants on the public's rivers and lands, especially on the Colorado Plateau. The Southwest's population shot from 8 million in 1945 to 32 million in the late 1990s. Almost all of the growth was in the cities. In the West as a whole, population in the eleven western states stood at 17 million at the end of the War. Today it has boomed to 57 million. By the year 2000, it will hit 60 million, a 350% increase.

At the end of World War II, when the modern land rush began, the traditional system of western water law remained intact. But as the habitat for the law—the social habitat as well as the natural habitat—began to undergo fundamental change, the law began to reflect geographical reality, social values, and economics.

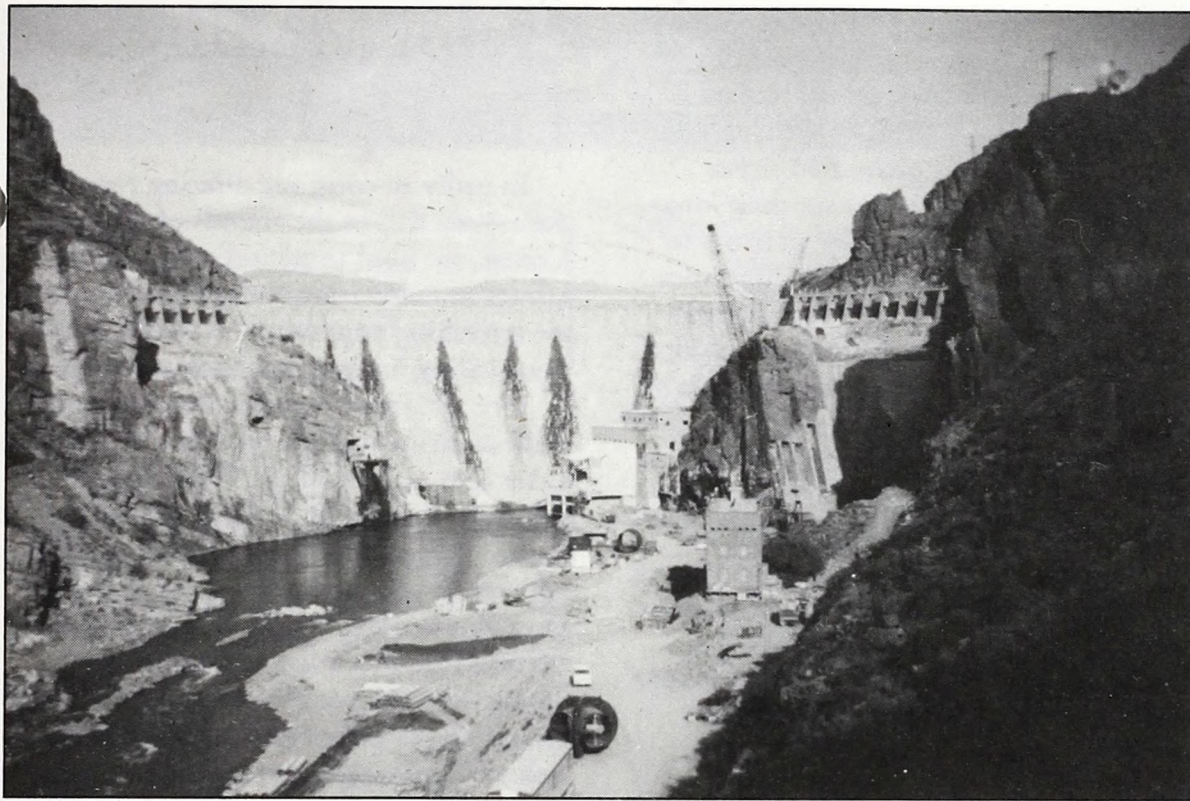
We began to understand the costs. Burgeoning budgets. Lost rivers. Flooded and drained wetlands. Wrecked canyons. Still more extinguished species.

Other costs were paid disproportionately by minority peoples. Traditional western water law never worked well for Indians or Hispanics. Hispanic communities were forced out by the new reclamation economics on the lower Rio Grande and flooded out on the upper San Juan. Among the tribes, traditional ways of life were debilitated at Pyramid Lake and Walker River, on the salmon rivers of the Northwest, on the upper Missouri, and many other places.

And take Black Mesa. Arizona, and the Phoenix metropolitan area in particular, had dreamed of, and fought for, a major diversion of Colorado River water for most of the century. The Central Arizona Project (CAP) became a reality in the 1968 Colorado River Basin Project Act, one of the two principal water and power bills of the era. Initially, electricity to pump water on the pipeline's uphill runs was going to be generated by the Bridge and Marble Canyon Dams, which would have flooded 146 miles of the Grand Canyon. It was close, but public opinion rose up. Instead, Navajo Generating Station, sited next to Glen Canyon, would make the electricity for the CAP. The coal would come from Black Mesa, sacred to the Hopi. In spite of the leverage the Hopi had—their coal was some of the best in the world and it was the linchpin for the CAP, for the Big Build-up of the Southwest—Peabody Coal Company secured the coal in a sweetheart lease that included low royalty rates and Hopi water at the laughable rate of \$1.67 an acre-foot. Now we learn, from personal files recently opened at the University of Utah Library, that John Boyden, the lawyer for the Hopi, represented Peabody Coal at the same time on the same transaction.

I believe, especially given the way that events have accelerated so quickly, and on such a large scale, that we have responded admirably in many respects.

In a sense, the largest trend is the way that water law has opened up. Traditionally, water policy has always been a closed system. Individual developers, not any



Roosevelt Dam under reconstruction, 1992

government, controlled the rivers. Government was needed only to fund and build projects for individual developers. Water was water, separate from land, separate from wildlife, separate from social constraints, largely separate, in fact, from economic constraints. Then, beginning most notably in the late 1970s and 1980s, the public showed its determination to become involved in water decisions — a shift away from the right of individual water developers to make unilateral decisions toward a fuller recognition of the public interest. Although there are plenty of remnants of the idea that water policy is a closed domain, the dominant approach now is to treat water as one organic part of natural resources policy, of social policy.

We have begun to change the way we make natural resource decisions. The traditional structure has had two main layers, general federal laws—the Federal Power Act, the Reclamation Acts, the Taylor Grazing Act, and modern federal statutes such as NEPA, the Clean Water Act, and the NFMA—and state laws, such as water laws and state forest practices acts, which typically were much looser. In many cases, however, we have broken the traditional mold and moved into much more flexible, creative, and individualized approaches focusing on specific natural systems. The federal government is less dominant, sometimes serving mainly as a convener. The states and the third group of sovereigns, the tribes, have become much more active. The new approach is collaborative, with all affected governments, interest groups, and disciplines at the table.

The objective is sustainability of some natural system. Traditional multiple use-sustained yield management measured outputs such as acre-feet, kilowatts, board feet, and animal unit months. Sustainability today is broadly writ, encompassing a much broader range of things to be sustained, including salmon, eagles, wolves, humbler animals such as voles and chubs, archaeological sites, good rafting water, long vistas, wetlands, open space, solitude, beauty, and the cultures of traditional societies, whether they be Indian tribes, Hispanic towns, or ranch and farm communities. We have rightly begun to adopt an ambitious definition of sustainability.

We've made impressive progress in this kind of decision-making, which is local not national, particular not general, open not closed, creative not cookie-cuttered, messy not neat. You can see it at Yellowstone, at Lake Tahoe, on the Truckee River, in the Sacramento Bay Delta, at Mono Lake, in the Grand Canyon, on the Clark Fork in Montana, along the Columbia River Gorge, on the Umatilla River, in the rivers where the new watershed councils are at work, and at numerous other places.

So we have responded to changing times and have opened up the process to try to achieve sustainability. It is a real accomplishment we ought to take pride in.



Yet we have an uneasiness in our hearts and minds and viscera about whether

making collaborative decisions based on natural systems—valuable though the approach may be—can be enough in the long term. Take the groundwater situation in metropolitan Phoenix. Arizona has taken strong, progressive action—the Groundwater Management Act in 1980, the limits on water farming in 1991, the 1995 rules on “assured water supplies.” The current groundwater overdraft is about 350,000 acre-feet, down from about 1.3 million acre-feet in 1980. Yet the current figure is misleading because a depressed agricultural economy has reduced the demand for water and Phoenix has had several recent wet years. The true reduction is considerably less. Probably the current level of overdraft is best understood as being about 850,000.

So Phoenix remains far from safe yield, even though it is now receiving Colorado River water. It is uncertain how much future CAP water Phoenix can acquire from farmers and tribes. Meanwhile, the people continue to pour in. Arizona is the nation's third fastest-growing state.

Even water transfers, today's panaceas, can have steep costs—some of the same costs as old-style projects, others that we have not learned how to address in a serious way.

Seven other western states join Arizona among the ten fastest-growing states.

Water policy is social, as well as natural resource policy. It always has been. Transfers can take irrigated land out of business and debilitate farm and ranch communities. We have seen that at Owens Valley, along the Arkansas River in Colorado, and in some Arizona rural areas before the water farming debacle was largely arrested in the early 1990s. Today farms up and down the Colorado Front Range operate as tenants, waiting for Colorado Springs, Thornton, and other cities to call in their leased rights when new subdivisions want the water.

Water marketing can also debilitate traditional communities. In Northern New Mexico, acequia associations—the Hispanic water distribution collectives—already feel the pressure from Albuquerque, which is growing apace with no significant water conservation program. As a mayordomo from an acequia in the

Chama Valley told me, "Since a ditch system must be maintained by the collective labor of its users, each time a parcel loses its water rights, a proportionate amount of labor and ditch fees is also lost to the system as a whole. . . . Each member is a link in the chain of community water use and control, and each time a member and his quota of water and labor are lost, the overall chain is weakened." The integrity of our legal system

Yes, we can bring enough water to the cities for the new subdivisions but is this the wisest use and are we willing to bear the costs?

could not hold when it came to recognizing Hispanic ownership of their land grants, supposedly guaranteed by the Treaty of Guadalupe Hidalgo, but the Hispanic communities have by and large held on to their water. Can our system of water laws have the integrity to assure a fair treatment of the acequias when the cities and their developers come calling?

The uneasiness about Phoenix groundwater is replicated for aquifers and river systems across the West. The apprehen-

sion about transfers in Hispanic communities is found on many reservations. Perhaps worse, the process for Indian water settlements is in shambles, leaving those tribes without quantified rights wondering if they will ever see their long-promised *Winters* water. The pressure to supply water for urban growth continues to build. Seven other western states join Arizona among the ten fastest-growing states. California is projected to grow by more than 50%, or 17 million people, by the year 2025. Several of the other western states are projected to grow at even faster rates. That is 2025. What about 2050?

We know we can produce enough molecules of water for population growth in virtually any magnitude imaginable. But we also know that we can never escape the glare of John Wesley Powell's stern visage. Thirteen percent of the West is desert and most of the rest of it is arid. Water is scarce, distinctive, valuable. Yes, we can bring enough water to the cities for the new subdivisions but is this the wisest use and are we willing to bear the costs? The next century will bring different specifics than this one, but if we have learned any lesson, it is that from now on we must ask the question we never bothered to ask in water policy during the Big Build-up: we can do it, but is it worth it?



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Salt River upstream of Phoenix

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- RR08 "Facilitating Voluntary Transfers of Bureau of Reclamation-Supplied Water," Lawrence J. MacDonnell and others, Vol. I, 132 pgs. (\$12) & Vol. II, 346 pgs. (\$18), or both volumes for \$25, 1991.

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Preliminary Hot Topics Schedule:

- September 9: Platte River Cooperative Agreement
- October: Western Water Policy Review Advisory Commission
- November: To be announced

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